

Title (en)  
ENGINE FUEL NOZZLE AND SWIRLER

Title (de)  
KRAFTSTOFFDÜSE UND DRALLKÖRPER FÜR EINEN MOTOR

Title (fr)  
BUSE DE COMBUSTIBLE ET TOURBILLONNEUR DE MOTEUR

Publication  
**EP 4206537 A1 20230705 (EN)**

Application  
**EP 22186590 A 20220722**

Priority  
• US 202163294593 P 20211229  
• US 202217691781 A 20220310

Abstract (en)  
A turbine engine (10) can utilize a combustor (14) to combust fuel to drive the turbine (16), which drives the engine (10). A fuel nozzle assembly (100) can supply fuel to the combustor (14) for combustion or ignition of the fuel. The fuel nozzle assembly (100) can include a swirler (104) and a fuel nozzle (102) to supply a mixture of fuel and air for combustion. Increasing efficiency and carbon-containing emission needs require the use of alternative fuels, which combust at higher temperatures than traditional fuels, requiring improved fuel introduction without the occurrence of flame holding or flashback.

IPC 8 full level  
**F23R 3/28** (2006.01); **F23D 11/38** (2006.01); **F23R 3/14** (2006.01)

CPC (source: CN EP US)  
**F23D 14/24** (2013.01 - EP); **F23R 3/14** (2013.01 - CN EP US); **F23R 3/28** (2013.01 - CN); **F23R 3/286** (2013.01 - EP US); **F23C 2900/9901** (2013.01 - EP); **F23D 11/383** (2013.01 - US); **F23D 2900/14701** (2013.01 - US)

Citation (search report)  
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Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4206537 A1 20230705**; CN 116412415 A 20230711; US 2023204213 A1 20230629

DOCDB simple family (application)  
**EP 22186590 A 20220722**; CN 202211055026 A 20220831; US 202217691781 A 20220310